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DISCUSSION

H. A. L. RYFKOGEL, M. D. (516 Sutter Street, San Francisco).—Doctor Percy's packing technique deserves careful attention.

The postoperative comfort of Doctor Percy's patients on whom he has performed his long cautery dissections for carcinoma is very striking, as I have often personally noted. His method of giving "loving care" to the peritoneum is based on a careful analysis of the factors involved.

There is no doubt that dry gauze does less damage to the peritoneum than does the cement-dissolving and infection-spreading wet sponge. Anyone who has used the single long pack realizes its greater efficiency. Operations under local anesthesia have taught us that irritation of the parietal peritoneum causes pain and must be avoided even though the patient be anesthetized.

Doctor Percy probably does not assert that contractions of the diaphragm cease on opening the abdomen, but rather that a theoretical rhythm between the contractions of the diaphragm and abdominal muscles disappear.

In the upper abdomen there is normally a subatmospheric pressure which, in spite of the descent of the diaphragm, is increased during inspiration because the upper abdominal capacity becomes greater when the lower ribs expand. It is possible that this varying negative pressure helps the circulation of venous blood in the abdomen. That free air or gas in the peritoneal cavity immediately travels to the subdiaphragmatic region is a common clinical observation and, therefore, when the abdomen is opened the atmospheric pressure probably becomes positive. It is possible that Doctor Percy's pack by forcing the viscera against the diaphragm restores the normal pressure.

For many years I have quoted to my assistants another statement made by Hertzler in the chapter to which Doctor Percy refers:

"There is but one pack preferable to the dry pack in the abdomen; that is the one that remains in the dressing closet. If the portion of the organ only is exposed which is the object of operative attack, no pack of any sort is needed."

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CHARLES T. STURGEON, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Percy has brought out in a very logical manner the different steps by which a major operation can be performed with the minimum amount of trauma. There is very little that one can add and certainly nothing that one can criticize.

In all operations of the lower abdomen the patient should be placed in the Trendelenburg position while the anesthetic is being given. Usually by the time the abdomen is opened the intestines have gravitated toward the diaphragm, and it requires very little manipulation to place the protective pack.

The patient should be thoroughly anesthetized before the surgeon starts the operation, for probably one of the greatest causes of damage to the peritoneum is the attempt of the surgeon to forcibly replace the small intestines into the abdomen or to pack away the intestines toward the diaphragm while the patient is straining.

As mentioned by Doctor Percy, very little anesthetic should be used during the course of the operation, but a point to be emphasized is that the patient should be thoroughly anesthetized before any attempt is made to remove the packing, because if the patient should strain while the gauze is being removed the intestines will be dragged out on the abdominal wall and will again have to be forcibly returned into the abdominal cavity.

A point which Doctor Percy did not mention but which I am sure he recognizes, is that in closing the peritoneum the cut edges should be everted, thereby preventing the possibility of tags projecting into the peritoneal cavity and lessening the possibility of postoperative adhesions.

Doctor Percy should be congratulated in bringing before the surgical section a technique with which every surgeon should be thoroughly familiar.

SODIUM AMYTAL—ITS VALUE IN SEASICKNESS

By HAROLD HAMILTON, M. D.
Honolulu, Hawaii

AT the suggestion of the medical director of the Matson Navigation Company, a study was made of the value of the more commonly used drugs in the prevention and treatment of seasickness, with special attention being directed toward sodium amytal.

PROCEDURE ABOARD SHIP

During the past year sodium amytal has been given very extensive trials at sea. During this period of time upward of four hundred cases of seasickness were studied as regards their reaction to treatment with this drug. For the most part the cases treated were between the ages of sixteen and sixty. The following doses apply, therefore, to adults. At the same time patients treated with sodium nitrate, bromids, belladonna, members of the coal-tar group, and veronal, were observed very carefully for the purpose of comparing their clinical characteristics and efficiency with that of sodium amytal. Special attention was paid to the value of hyoscin hydrobromid in the treatment of seasickness. It might be mentioned at this point that up to the time of the introduction of sodium amytal, hyoscin hydrobromid was, in our experience, the most valuable drug with which to prevent and to combat seasickness; veronal was a close second.

DOSAGE AND METHODS USED

As far as was possible, means were taken to induce potential patients to take the drug about an hour prior to the sailing of the ship, and when so used, it was administered in capsule form, one capsule (3 grains or 0.2 gram) being remarkably efficacious as a prophylactic. If subsequent medication became necessary, a second capsule was given about two hours after the first. The results were almost invariably satisfactory.

Most of the patients were seen, however, after the ship had sailed and after the symptoms of seasickness were well under way. It was in these cases that the effect of the sodium amytal were most marked and satisfactory, and it was the stage of the condition in which relief is most welcome to the patients. Truly they wished themselves dead, and usually had long since given up all hope of relief. In these cases an initial dose of 3 grains or 0.2 gram is given, followed by a similar dose two hours later. Symptomatic relief was noted in approximately 70 per cent of the cases in from

fifteen to forty-five minutes after the preliminary dose. Clinically, the typical patient falls very shortly into a light sleep from which he may be easily aroused. The condition lasts from three to four hours. From this partial narcosis the patient awakens feeling markedly refreshed, free from nausea, and in a surprisingly number of cases actually demands food. It is noteworthy that the administration of the drug is not followed by the mental depression so frequently seen after bromid or veronal medication.

In cases where nausea is very severe and emesis almost continuous, it is obvious that the drug cannot be given in capsule form, for it is ejected before its pharmacological action can have taken place. On the other hand, iced bitters and certain stomachics are fairly well tolerated and retained by patients with fairly severe nausea, and the administration of the drug in ice water permitted retention for sufficient time for it to take effect. The administration in this way in ice water was found to be vastly superior to its administration in milk or syrups, and it might be remarked in passing that we are coming to use this method in an increasing number of cases, almost to the exclusion of the capsule. Emphasis must be placed on the importance of using water well iced; any suggestion of a warm solution is not well tolerated.

A small percentage of the victims of mal de mer present as the sole symptom a more or less severe degree of vertigo. These patients are usually quite comfortable while recumbent, but become very dizzy upon attempting to walk about. In these cases one capsule (3 grains or 0.2 gram) administered in solution in ice water suffices to clear up this condition in a very satisfactory manner.

The intravenous use of sodium amytal, which is finding a broad field of usefulness in surgery and obstetrics, has not as yet been attempted in this study. It does, however, open up a possible avenue of treatment in those rare cases of seasickness in which the patient is actually dangerously ill.

The rectal administration of sodium amytal has proved of value in other conditions, and it is easily seen that in selected cases this method should find a place in the treatment of mal de mer. It may be given either by inserting the capsule as a suppository or by dissolving its contents in a little water and injecting the solution into the rectum.

CONTRAINDICATIONS

Contraindications are singularly few. It should be given very cautiously to elderly people with generalized arteriosclerosis and hypertension. Should vascular depression manifest itself in an exceptionally sensitive patient, three-eighths to three-fourths grain (0.025 to 0.05 gram) ephedrin sulphate and seven and one-half grains (0.5 gram) caffein sodiobenzoate may be administered hypodermically. Sodium amytal should not be given to patients known to be hypersensitive to barbituric acid derivatives. In our series we have yet to encounter a case in which the slightest unfavorable reaction was noted.

SUMMARY

1. An extensive study was made of the value of sodium amytal in seasickness.

2. Comparisons were made between sodium amytal and several widely employed remedies for seasickness.

3. In order of efficacy, both as prophylactic and curative properties, we have (*a*) sodium amytal; (*b*) hyoscin hydrobromid; and (*c*) veronal.

4. One capsule (3 grains or 0.2 gram) repeated, if necessary, in two hours, was found to be remarkably effective.

5. Administration in solution in one ounce of ice water was found to be the method of choice.

6. The chief contraindications are the chronic degenerative processes, particularly in the elderly. It should not be given to those known to be hypersensitive to barbituric acid derivatives.

7. Ephedrin sulphate and caffein sodiobenzoate may be given hypodermically should vascular depression manifest itself in an exceptionally sensitive patient.

8. The intravenous and rectal methods of administration are suggested for selected cases.

P. O. Box 2969.

WHAT TO EAT ON GOING TO BED*

By Leo L. Stanley, M. D.
and
Gordon L. Tescher
San Quentin

THE hostess is often concerned with what she should serve to her guests after an evening of bridge. It has been demonstrated that the taking of a cup of coffee on retiring insures a more restful night than the taking of hot water or going to bed "on an empty stomach."†

This report is on some experiments which were made to find out whether the average individual rests better after eating a steak on retiring or devouring a quarter of a pound of cake, or taking ice cream, butter, or other fatty foods.

APPARATUS

An apparatus similar to that for determining the effects of coffee on sleep was used. (See California and Western Medicine, May 1931, page 359, for illustrations of apparatus used.)

This consisted of beds suspended over pneumatic bulbs in such a way that any movement of the subject was transmitted by rigid air-filled tubes to the recording kymograph. The apparatus is graphically described in Figure 1 of above referred to illustrations.

Figure 2 shows the arrangement of the bed suspended over the pneumatic bulb which in turn is connected by means of the air-filled tube to the kymograph (Figure 3), as per illustrations noted above.

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*From the Medical Department of the California State Prison at San Quentin, California.

†"The Effects of Coffee on Sleep" by Stanley and Tescher, California and Western Medicine, Vol. 34, No. 5 p. 359, May 1931.